

ABSTRACT OF THE DISCLOSURE

A semiconductor module (18) includes a ring-shaped metal frame (13) having a bottom surface for contact with a top surface of an external heat sink (11) and serving as a mounting surface. The ring-shaped metal frame (13) has a flange (20) along an inner periphery thereof for engagement with an outer peripheral part of an insulating substrate (17) at a first main surface of a ceramic plate (1). The metal frame (13) is fastened to the external heat sink (11) by screws (12) or bonded to the external heat sink (11) with an adhesive. The flange (20) of the metal frame (13) fastened or bonded to the external heat sink (11) presses the outer peripheral part of the insulating substrate (17) toward the external heat sink (11). This pressing force holds the insulating substrate (17) in pressure contact with the external heat sink (11). The semiconductor module (18) avoids the problem of a decreasing pressing force resulting from deformation to ensure a satisfactory heat dissipating property over a long period of time.